

Remarks

Claims 10 and 12 have been objected to for the reasons set forth on page 2 of the Examiner's Office Action. As the Examiner will note, both claims 10 and 12 have been amended to eliminate the informalities referred to by the Examiner. Accordingly, it is believed that this objection has been eliminated.

Claims 1, 2, 8, 9 and 11-12 are rejected by the Examiner under 35 U.S.C. § 102(a) as being anticipated by Tanaka, Japanese Patent 60-240456. Also, claims 3-6 and 10 have been rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Tanaka in view of Christine et al., U.S. Patent 6,105,821. These rejections are respectfully traversed.

The present invention relates to an ink tank for a ink jet printer containing a casing which accommodates a bag member wherein the bag member is collapsible and foldable into a sheet-like configuration when the bag is not employed in housing a quantity of ink. In the ink tank of the present invention, the width of the top and bottom walls of the bag member, when measured in a flat, sheet-like, folded configuration and in the direction of the front edge, is larger than the width of the casing, and the front wall opening is located near the bottom of the casing. Since the width of the bag member in its collapsed state is larger than the width of the casing, the bag can only be accommodated in the casing in a bent configuration, with at least one lateral portion of the bag being bent

upwardly and supported at a side wall of the casing. As a result, the casing may have a comparatively small width, and the spout will be disposed in the lowest part of the bag and the casing, even when the spout is arranged in the central region of the front edge of the bag. Since the possible deformations of the bag member are constrained, on the one hand by the sidewalls of the casing, and on the other hand, by the position of the spout and the front wall opening of the casing, the bag is forced to essentially retain its original folded, collapsed state, when it is empty. Thus, it is the intention of the present invention to utilize a casing which accommodates a bag member which has a much larger width than the width of the container to the extent that it can extend along the contour of the side walls of the casing up to the vicinity of the top of the wall of the casing and to structure the bag member in the casing such that the bag member assumes its initial position in the same folded state which it exhibited prior to being filled with ink.

It is the Applicants position that neither the Tanaka reference or the Christine et al. patent recognize the Applicants specific problem or the Applicants specific solution to such problems.

In the Tanaka patent looking at Figures 6(A), 6(B) and 6(C) it can be seen that there is no concern with the problem of ensuring that the bag member returns to a collapsed, folded position, that is, its initial position, after the ink has been removed from the bag member. In the Tanaka patent the bag is merely filled with ink and depleted from ink

with the bag merely going from an expanded state to a non-expanded state with no folding of the bag member being accomplished. The reason for this is that the overall structure of the device of the Tanaka patent is totally different from the present invention and, as such, the patentee is not confronted with the need properly accommodate an access amount of bag member after the ink has been removed therefrom.

To further clarify the present invention within the context of figures 3-6 of the Tanaka disclosure, figures 3-6 of the Tanaka reference are appended to the present amendment using the following symbols for the sake of explanation:

width of the bag	W
top wall of a bag	T
bottom wall of a bag	B
front edge of a bag	F
spout	S
width of the casing	WC

The bag member of the Tanaka patent is flattened in a way described in figures 6A/B/C, where the ultimate flat, folded sheet-like configuration cannot be found.

It is clear from claim 1 of the present application that the front wall of a casing is the wall with the opening provided therein, and the front edge of the bag is the edge wherein the spout is provided, in a central region thereof. Now looking at the construction which is disclosed in the

Tanaka patent it can be seen that the ink tank disclosed therein includes a casing and a bag, but figures 3-6, especially figure 5 (which is additionally depicted in a 90° rotated state for clarity reasons), clearly show that the width (W) of the top wall of the bag (T) and the bottom wall of the bag (B) when in a flat, sheet-like configuration, as described in the course of figures 6(A)-(C) of the Tanaka disclosure and measured in the direction of the front edge, as depicted in figures 6(A) – 6(C) is clearly NOT larger than the width of the casing (WC). Thus, it would appear clear that the Tanaka patent is not concerned with how to deal a bag member having a larger width than the width of the container so that the bag member when empty and collapsed can return to its original, folded, state. As a further distinction, it should be noted that the front wall open of the casing, in which a spout (S) is provided, is not located near the bottom wall of the casing. In any event, for all of these reasons, it is believed that the problems faced by Tanaka are certainly not the same as the problems faced by the present Applicants and accordingly this solution provided by the present Applicants are not even remotely considered or contemplated by the teachings of the Tanaka patent.

With respect to claims 3-6 and 10, the further reliance upon the Christine et al. patent does not render obvious the content of these claims. With respect to claims 3-6, the Christine et al. does not contemplate a folded bag member as defined by the present invention. Also, the Examiner is relying upon the flow inducer filament 7 to fill the

function of the induction filament as defined in claim 10 and newly added claims 14 and 15 of the present application. It is the Applicants position that the flow inducer fitment 7 of the Christine et al. patent functions to allow unimpeded discharge of the contents of the pouch from near the center of the volume within the pouch (column 5, lines 5-10) of the Christine et al. patent and as such is not even remotely concerned with accommodating the internal folds formed in a bag member as it collapses as a result of the excessive width of the bag member being disposed in the casing of the ink tank. Thus, the molded thermoplastic flow inducer fitment 7 provides continuous flow pads from various locations along its length towards the end of the discharge fitting 3 which traverses the secondary packaging carton 5 to provide an external threaded outlet portion 9 able to receive a closure cap 11 but eventually able to receive a suitable female fitting of a stencil duplicator from which ink within the pouch 5 is withdrawn under the action of a suction pump (see column 2, lines 60 to column 3, line 2) of the Christine et al. patent.

Claim 7 has been rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Tanaka in view of Nakamura et al., U.S. Patent 6,220,702 and Shimizu, U.S. 2001/0040612. This rejection is respectfully traversed.

First of all, it should be recognized that claim 7 is dependent upon claim 1, and thus it is believed that claim 7 is distinguishable over the

references relied upon by the Examiner for the same reasons as claim 1 is considered patentable thereover. In any event, in rejecting claim 7, the Examiner argues that it would be obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teachings of the Nakamura et al. and Shimizu et al. references into the Tanaka ink reservoir for the purpose of increasing strength of walls of the ink pack. However, page 6 of the present application recites that the material of the bag should, on the one hand, provide a sufficient air and liquid tightness of the bag and, on the other hand, be flexible enough to permit the bag to collapse (fold) completely. This can be achieved by the multi-layer construction of the walls of the bag as defined by claim 7 of the present application.

Accordingly, in view of the above remarks, it can be really concluded that the Applicants recognize specific problems associated with the use of a bag member which is larger in width than the casing and have solved the problem of being able to repeatedly return the bag member to its original collapsed, folded state after the ink has been expelled from the bag member. None of the references relied upon by the Examiner, either alone or in combination recognize this specific problem or the Applicants solution to this problem. Thus, the Examiner is rejecting the claims of the present application in view of the Applicant's own disclosure.

Accordingly, reconsideration of the objections and rejections and allowance of all the claims in the present application are respectfully requested.

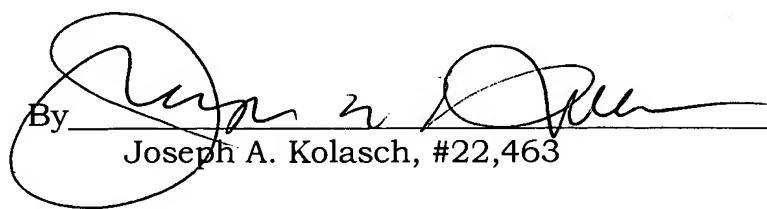
Conclusion

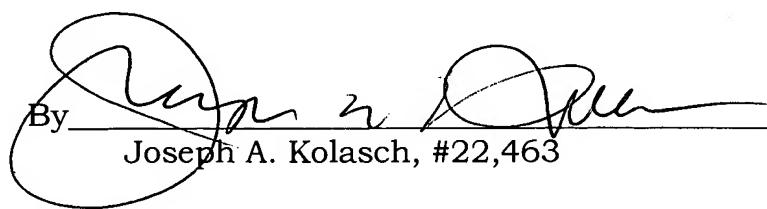
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time use.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP



By 
Joseph A. Kolasch, #22,463

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

JAK:sld

Attachment: Figures 3, 4, 5, 6(A), 6(B) and 6(C) of the Tanaka patent